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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,532	08/22/2003	Paul E. Kightlinger	20863 . 00	8114

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EXAMINER

BERGIN, JAMES S

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,532

Applicant(s)

KIGHTLINGER, PAUL E.

Examiner

James S. Bergin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) 3 and 12-19 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2 and 4-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/22/2003.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1, 2 and 4-11, drawn to a cartridge, classified in class 102, subclass 430.
 - II. Claims 3 and 12-19, drawn to a chamber, classified in class 42, subclass 76.01.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, with the aid of an adapter, invention I has separate utility such as a cartridge for use in a chamber other than the chamber of invention II. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Warren Edmonds on 5/4/2005 a provisional election was made with traverse to prosecute the invention of group I, claims 1, 2 and 4-11. Affirmation of this election must be made by applicant in replying to this Office

action. Claims 3 and 12-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 2 and 4-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 2, line 9, it is unclear whether the "total length" referred to is the total length of the cartridge (L3) or the body length (L1). The specification refers to L3, the total length of the cartridge, with a value between 0.870 and 1.0 and not L1, the body length (see applicant's specification and figure). Additionally, in line 3, it is unclear which axis of the cartridge is being referred to: is it the longitudinal axis or some other axis?

In claims 8-10, it is unclear whether "*said total length*" (claim 8) and "*said body length*" (claims 9 & 10) refer to the same dimension? Note again that L3, the total length of the cartridge, rather than L1, the body length, has been disclosed with a value of 0.875, 0.935 or 0.995 inches.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4, 5 and 8-11 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,293,203 B1 (Alexander et al., hereinafter "Alexander") in view of RCBS LOAD CARTRIDGE DESIGNER UTILITY and THE RELOAD BENCH.

In as much as the claims can be understood because of the indefiniteness recited above, and regarding claim 1, Alexander discloses a cartridge for a bullet with an external diameter somewhere in the range of 4.5 mm (0.177 inches) to 6mm (0.236 inches col. 3. lines 64-67); a cartridge body, said cartridge body comprising a first external diameter of about 0.375 inches (col. 3. lines 64-67, 9.6 mm/ 0.3779 inches – note that 0.3779 inches is considered to be about 0.375 inches), a second external diameter C (col. 3, lines 50-55 and figure 2) which is less than or equal to the first body outside diameter; a total cartridge body length somewhere in the range of 17 mm to 26 mm (0.669 inches to 1.023 inches – col. 4, lines 15, 16); an extraction groove (figs. 1-3); a cartridge neck (Figs. 1-3) having an external diameter of about 0.260 inches (Alexander's' internal diameter E measures 5.66 mm / 0.223 inches – col. 5, lines 40, 41), the neck adapted to fit the bullet of the size mentioned above. Alexander discloses that in a preferred embodiment, the cartridge has a shoulder angle of 32 degrees (col. 5, line 35).

Alexander does not specifically disclose that the shoulder angle can be about 28 degrees.

RCBS LOAD CARTRIDGE DESIGNER UTILITY discloses a utility that allows a user to experiment with a known cartridge case by varying any illustrated dimension

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thereof shown on the display screen, including modifying the shoulder angle, to produce a customized cartridge having different properties (see especially pages 1 and 2).

THE RELOAD BENCH discloses that in the 1930's, cartridge designers had customized a cartridge by varying the shoulder angle to 28 degrees to produce a desired cartridge case.

In view of RCBS LOAD CARTRIDGE DESIGNER UTILITY, it would have been obvious to one of ordinary skill in the art at the time that the invention was made, to experiment with the Alexander cartridge case by varying its shoulder angle to produce a customized cartridge case having different properties. It would further have been obvious, in view of RELOAD BENCH, to select the prior art known shoulder angle of 28 degrees as the shoulder angle of the above-modified Alexander cartridge case, and thereby produce an experimental cartridge case with different properties.

(It should also be noted that the courts have decided that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

Regarding claim 4, the Alexander cartridge is adapted for a handgun defined by Alexander as a pistol or a submachine gun (col. 2, lines 66, 67).

Regarding claim 5, the Alexander cartridge is adapted for use with self-loading, semi-automatic or automatic weapons (col. 3, lines 1, 2). The addition of a rifled barrel to such a weapon would not render the Alexander cartridge inoperative.

Regarding claims 8-10, and in as much as the claims can be understood because of the indefiniteness recited above, Alexander discloses a cartridge with a total

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cartridge body length somewhere in the range of 17 mm to 26 mm (0.669 inches to 1.023 inches – col. 4, lines 15, 16).

Regarding claim 11, Alexander does not disclose that the cartridge case is tapered with a "*second body outside diameter*", being about 0.367 inches. However, as noted above, RCBS LOAD CARTRIDGE DESIGNER UTILITY discloses a utility that allows a user to experiment with a known cartridge case by varying any illustrated dimension thereof shown on the display screen, including modifying the body taper, to produce a customized cartridge (see especially pages 1 and 2).

In view of RCBS LOAD CARTRIDGE DESIGNER UTILITY, it would have been obvious to one of ordinary skill in the art at the time that the invention was made, to experiment with the Alexander cartridge case by modifying the body taper to produce a customized cartridge case for a particular weapon known to a user.

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,293,203 B1 (Alexander et al., hereinafter "Alexander") in view of RCBS LOAD CARTRIDGE DESIGNER UTILITY and THE RELOAD BENCH as applied to claim 1 above, and further in view of US 6,354,221 B1 (Jamison).

Alexander discloses a bullet velocity of not less than 518 meters per second (1699 fps) which velocity will cause a high velocity wound to a targeted individual (col. 2, lines 45-50). However in Fig. 5 of the Alexander patent appears to show a maximum muzzle velocity of about 2,000 fps. So Alexander does not specifically disclose that the bullet velocity is capable of reaching 2,500 fps.

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However, Jamison '221 discloses H-414 propellant which can impart a velocity of up to 4,045 fps to a bullet.

It would have been obvious, in view of Jamison '221, to use an amount of H-414 propellant in the Alexander cartridge casing so as to impart a velocity of greater than 2,500 or 3,000 fps to the bullet expelled therefrom.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,293,203 B1 (Alexander et al., hereinafter "Alexander") in view of US 6,354,221 B1 (Jamison).

In as much as the claims can be understood because of the indefiniteness recited above, and regarding claim 2, Alexander discloses a cartridge for a bullet with an external diameter somewhere in the range of 4.5 mm (0.177 inches) to 6mm (0.236 inches col. 3. lines 64-67); a cartridge body, said cartridge body comprising a first external diameter of about 0.375 inches (col. 3. lines 64-67, 9.6 mm/ 0.3779 inches – note that 0.3779 inches is considered to be about 0.375 inches), a second external diameter C (col. 3, lines 50-55 and figure 2) which is less than or equal to the first body outside diameter; a total cartridge body length somewhere in the range of 17 mm to 26 mm (0.669 inches to 1.023 inches – col. 4, lines 15, 16); an extraction groove (figs. 1-3); a cartridge neck (Figs. 1-3) having an external diameter of about 0.260 inches (Alexanders' internal diameter E measures 5.66 mm / 0.223 inches – col. 5, lines 40, 41), the neck adapted to fit the bullet of the size mentioned above. Alexander discloses that in a preferred embodiment, the cartridge has a predetermined shoulder angle of 32 degrees (col. 5, line 35).

Alexander discloses a bullet velocity of not less than 518 meters per second (1699 fps) which velocity will cause a high velocity wound to a targeted individual (col. 2, lines 45-50). However in Fig. 5 of the Alexander patent appears to show a maximum muzzle velocity of about 2,000 fps. So Alexander does not specifically disclose that the bullet velocity is capable of reaching 2,500 fps.

However, Jamison '221 discloses H-414 propellant which can impart a velocity of up to 4,045 fps to a bullet.

It would have been obvious, in view of Jamison '221, to use an amount of H-414 propellant in the Alexander cartridge casing so as to impart a velocity of greater than 2,500 fps to the bullet expelled therefrom.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ramirez et al. (US 6,532,876 B1 – discloses in col. 5, lines 4-10 altering the shoulder angle to allow easier feeding in an automatic weapon); Jamison (US 6,675,717 B2 – discloses in col. 6, lines 40-55, "Swift 0.220 cartridge with a shoulder angle of 21 degrees and a muzzle velocity of 3,685 fps); Rico (US 5,277,119 A – discloses a tapered cartridge with a length of .09 inches – see abstract and figs.); Kramer (US 5,463,959 A) discloses a relevant cartridge); Jamison (US 6,595,138 B2 – discloses a relevant cartridge). Note that the examiner has limited the number of citations due to the extremely crowded nature of available pertinent art in the area of the applicant's invention.

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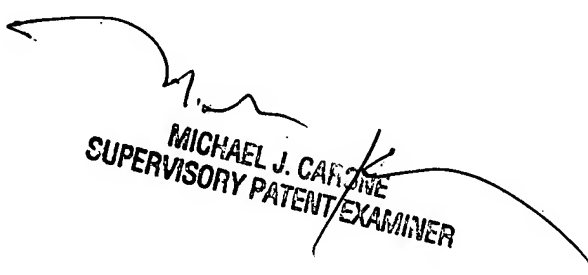
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Bergin whose telephone number is 571-272-6872. The examiner can normally be reached on Monday - Wednesday and Friday, 8.30 - 5.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James S. Bergin



MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER